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BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

In the Matter of

Revision of the Commission's Rules to
Ensure Compatibility with Enhanced
911 Emergency Calling Systems

CC Docket No. 94-102

LEAP WIRELESS INTERNATIONAL, INC.
PETITION FOR PARTIAL WAIVER OF
E-911 PHASE II IMPLEMENTATION MILESTONES

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TABLE OF CONTENTS

	<u>Page</u>
I. INTRODUCTION AND SUMMARY.....	2
A. Leap’s Innovative Cricket Service Model.....	2
B. Leap’s E-911 Waiver Request.....	4
II. Waiver is Appropriate Under These Circumstances.	7
III. NETWORK-BASED SOLUTIONS ARE UNSUITABLE.....	8
A. Network Solutions are Less Accurate than Handset Solutions.....	8
B. Network Solutions Would Not Work Well in Leap’s Markets.....	9
C. Network Solutions are Prohibitively Expensive and Potentially Unworkable.....	11
IV. HANDSET-BASED SOLUTIONS WILL NOT BE AVAILABLE IN TIME.	13
V. LEAP WILL ADOPT A PHASED-IMPLEMENTATION SCHEDULE THAT PROVIDES A CLEAR PATH TO COMPLIANCE.....	17
A. Leap’s Alternate Timetable Postpones the Interim Milestones; the Final Implementation Deadline Will Be Met on Time.	17
B. Installation of PDE and MPC Equipment Will Not Significantly Delay Compliance.....	19
VI. CONCLUSION.....	21

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Leap Wireless International, Inc., on behalf of itself and its affiliated entities (collectively, "Leap"), hereby requests a partial waiver of the Commission's E-911 Phase II rules, 47 CFR § 20.18. Despite its efforts, Leap has not been able to identify any handset vendor that can sell it ALI-capable handsets in time to meet the Commission's implementation milestones. However, Leap has identified an alternative implementation timeline that charts a clear path to compliance, and will meet the Commission's deadline for achieving 95 percent penetration of ALI-capable handsets. Leap therefore seeks a partial waiver of the Commission's rules to permit Leap to adopt and implement the alternative plan outlined in this petition.

I. INTRODUCTION AND SUMMARY

A. Leap's Innovative Cricket Service Model

Leap is an Entrepreneurs' Block licensee and a Small Business under the Commission's rules.¹ It holds C, D, E and F block PCS licenses in a number of BTAs throughout the United States, primarily in small to midsized markets that larger carriers regard as "second tier." Leap began offering service in Chattanooga in 1999, and has now expanded to provide wireless service to nearly half a million customers in 26 Basic Trading Areas ("BTAs") throughout the United States. Leap is currently engaged in an aggressive program of build-out in its various markets, and will launch service in a new market approximately once every two weeks between now and the close of 2001.

Leap provides service under the Cricket® brand, a service concept that is unlike most traditional wireless offerings and that has proven to be extremely successful with consumers. Cricket subscribers receive *unlimited* local airtime for one low monthly fee - \$29.95 to \$34.95 depending upon the market. This extraordinary value is particularly appealing to the mass consumer market; a market demographic that has been left relatively underserved by more expensive traditional service offerings. Many of Cricket's customers are blue-collar or clerical workers and have relatively low incomes. In its efforts to reach out to the mass market and provide service on terms that will be attractive to this relatively underserved demographic, Leap has established a unique service model that differs from those of larger carriers in much more than simply its pricing structure.

¹ See AirGate Wireless L.L.C. and Cricket Holdings, Inc., *Memorandum Opinion and Order*, 14 FCC Rcd 11,827 (WTB 1999), *aff'd*, Applications of AirGate Wireless, L.L.C., et al., FCC File Nos. 0000002035, et al. *Memorandum Opinion and Order* (rel. July 27, 2000).

As an initial matter, Leap has designed its Cricket markets with state-of-the-art technology and network architecture to accommodate the heavy traffic generated by the Cricket service plan and to deliver an all-digital, crystal-clear signal with few blocked or dropped calls. Leap promises and delivers service where its customers “live, work and play.”

The service is available on a month-to-month basis without annual contracts or commitments. Customers are not required to pass credit checks to obtain service. Cricket also sells its handsets in a broad variety of channels to increase the availability of its service to the mass consumer market. Thus, Cricket handsets are sold with other wireless handsets in national chain stores like Office Depot and Costco, but also in non-traditional outlets such as the Kroger grocery store chain, convenience stores such as Circle K, gas station convenience stores and in some cases, neighborhood beauty salons and barber shops.

As a result of this unusual approach to marketing and service terms, Leap is unlike many of the larger traditional carriers in ways that are relevant to its ability to comply with the Commission's E911 mandate. First, Cricket customers are highly cost-sensitive. A substantial increase in cost would likely drive away a significant portion of the subscriber base. Because of its low cost Cricket attracts consumers who would not otherwise take wireless service – most of its customers are first-time wireless users – and an increase in monthly cost would likely drive many of them out of the market entirely. Perhaps even more than monthly costs, these customers need to minimize their up-front investment in a handset purchase. But because Cricket does not require annual contracts, it cannot subsidize handsets by offsetting the cost of the subsidy with assured revenue from one or two-year commitments from customers. Therefore, the cost of the new handset must be borne to a great extent by the individual customer

at the time of purchase. And any increase in up-front cost would likely dissuade some potential consumers from taking the Cricket service.

Furthermore, because of its distribution and marketing chain, which relies largely on mass-market retailers and other third-party and unassisted sales channels, Leap can sell only a limited variety of handsets. Leap currently sells only two models of handsets in most of its markets. It may therefore be difficult to roll out and persuade consumers to buy a handset that is significantly more expensive than the immediate alternative.

Leap has created a successful business by providing top-quality wireless service to a market segment that most traditional carriers have ignored, and by doing so has provided benefits to the public that economists are only now beginning to quantify.² In the spirit of the 1996 Telecom Act, Leap has created competition with both the incumbent local exchange carriers (ILECs) as well as the existing wireless carriers. Leap is committed to providing its customers with service that resembles wireline telephony in everything except its immobility. Despite its best efforts, however, Leap has been unable to find a way to provide its customers with E-911 Phase II compliant service in time for the Commission's initial implementation milestones.

B. Leap's E-911 Waiver Request

The Commission's rules require CMRS providers to implement Enhanced 911 in two phases. Phase II requires carriers to provide Public Safety Answering Points ("PSAPs") with Automatic Location Information ("ALI") that pinpoints a 911 caller's geographic location

² See *Declaration of Peter Cramton*, attached to Comments of Leap Wireless International, Inc., 2000 Biennial Regulatory Review Spectrum Aggregation Limits for Commercial Mobile Radio Services, WT Dkt. No. 01-14 (filed April 13, 2001).

to within certain tolerances of accuracy.³ It likewise provides a timetable over which carriers are required to implement this mandate.⁴

Leap has worked with its equipment vendors to devise a solution that will meet – indeed, it will far exceed – the required Phase II ALI capabilities. However, due to circumstances beyond its control, Leap will not be able to meet the Commission’s prescribed implementation milestones. Leap has investigated both network and handset-based solutions, and has concluded that network-based solutions are impractical for its network. The available or proposed network-based solutions investigated by Leap and its E911 consultant, InCode Telecom, would be difficult and expensive to install, and would be far less accurate than handset-based solutions even under the best of circumstances. Worse, these network solutions would not work adequately in some of the less densely populated areas served by Leap.

Because network-based solutions would not work well in Leap’s networks, Leap elected to provide Phase II E911 service to its customers through a handset-based solution. However, Leap has recently found that it will be unable to obtain ALI-capable handsets in time to meet the Commission’s implementation milestones. Leap does not design or manufacture equipment, and is completely dependent upon industry handset and infrastructure vendors for the products it sells. Further, as a newer and smaller carrier, Leap must take a second chair behind the larger carriers, who may be able to utilize their purchasing power to receive compliant handsets before manufacturers sell them to Leap. Finally, because of its unusual marketing and distribution structure, and the mass market demographics of its customers, Leap will likely face difficulties inducing its customers to purchase new, more expensive ALI-complaint handsets.

³ See 47 C.F.R. § 20.18(h).

⁴ See 47 C.F.R. §§ 20.18(f), 20.18(g).

As a result of the foregoing, and as detailed below, Leap respectfully requests a waiver of the Commission's rules to the extent necessary to allow Leap to adopt the following implementation timeline:

Handset Implementation:

- Leap will begin sales of ALI-capable handsets as soon as they are commercially available, and in any event by June 30, 2002⁵
- 25 percent of all new Leap activations are expected to be Phase II compliant by September 30, 2002.
- 50 percent of all new Leap activations are expected to be Phase II compliant by January 31, 2003
- 100 percent of all new activations will be compliant by October 31, 2003.
- 95 percent of all Leap customers will use handsets that are ALI-compliant by December 31, 2005.

Network Implementation:

- Leap will complete network upgrades in selected Lucent markets by December 31, 2001.
- Leap will complete network upgrades in the remainder of its Lucent markets by March 31, 2002.
- Leap will complete network upgrades in its Ericsson markets by June 30, 2002.
- Leap will complete network upgrades in its Nortel markets by September 30, 2002

II. Waiver is Appropriate Under These Circumstances.

The Commission may waive any of its rules for good cause shown.⁶ In the context of E-911 implementation, the Commission has recognized that "factors outside [a

⁵ As discussed herein, based on its continuing conversations with CDMA handset vendors, Leap believes that CDMA handsets that are ALI-compliant will not be commercially available for purchase and widespread resale by Leap until the second quarter of 2002.

carrier's] control" might prevent a carriers from timely implementing E-911 Phase II.⁷ The Commission has indicated that in such cases, particularly where "technology-related issues" or other circumstances prevent timely compliance, "individual waivers" may be appropriate.⁸ This policy is in keeping with the Commission's general practice: it has consistently recognized that "bringing a new product to market requires manufacturers to undertake a time-consuming series of complex steps."⁹ And therefore it has often waived compliance deadlines for its licensees when manufacturers cannot make products available in time.¹⁰

In light of the important safety goals of Enhanced 911, the Commission has stated that it will grant only waivers that are "focused and limited in scope, and with a clear path to full compliance."¹¹ And the Commission has indicated that carriers must document the "concrete steps" a carrier has made and will make towards compliance.¹²

Leap's waiver request falls squarely within the standard for relief. Leap has investigated all manner of possible E-911 solutions, and has determined that it must adopt a handset-based solution; however, it also determined that it will be unable to implement Phase II in time to meet the Commission's initial October 1, 2001 deadline. But as set forth in detail below, Leap is only requesting a limited waiver of the first phases of the Commission's

⁶ See, e.g., *WAIT Radio v. FCC*, 418 F.2d 1153, 1159 (D.C. Cir. 1969).

⁷ Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Calling Systems, *Fourth Memorandum Opinion and Order*, 15 FCC Rcd. 17442 ¶ 45 (2000) ("*Fourth MO&O*").

⁸ *Id.* ¶ 43.

⁹ GARMIN International, Inc. *Order on Reconsideration*, DA 01-851 ¶ 6 (2001).

¹⁰ See, e.g., Implementation of Section 17 of the Cable Television Consumer Protection and Competition Act of 1992; Compatibility Between Cable Systems and Consumer Electronics Equipment, 9 FCC Rcd. 1981 ¶¶ 76-77 (1994) (compliant cable boxes not available from equipment makers).

¹¹ *Id.* ¶ 44.

¹² *Id.*

implementation timeline. Leap will still achieve full compliance – 95 percent of all subscribers carrying Phase II-compliant handsets – on or before the Commission’s deadline.

III. NETWORK-BASED SOLUTIONS ARE UNSUITABLE

For some time before declaring in October 2000 that it would use a handset-based solution, Leap studied and considered a variety of network-based alternatives for Phase II compliance. In particular, Leap examined US Wireless and TruePosition’s technologies to determine the accuracy, cost and technical feasibility of such solutions. Ultimately, network-based solutions proved to be unwieldy, expensive, inaccurate, and in some cases simply unworkable. Since then, Leap’s further investigations have shown this continues to be the case.

A. Network Solutions are Less Accurate than Handset Solutions

As an initial matter, the network-based solutions that Leap has investigated have been shown to be inaccurate. Even under ideal conditions network-based systems are far less accurate than AGPS, and conditions are seldom ideal. Based on its own evaluation, and based on information gained from third parties, Leap developed serious doubts as to whether the network solutions with which it is familiar will perform adequately.¹³ In fact, the Commission recognized that network solutions are far less accurate than handset solutions, and incorporated that inaccuracy into its rules which allow network-based solutions to perform to standards far less accurate than handset-based solutions.¹⁴ Based upon the relative accuracy of network-based solutions and handset-based solutions, Leap believes its customers would be better served by implementation of the more accurate handset based solution.

¹³ The record in this proceeding tends to confirm Leap’s doubts. For example, Nextel recently demonstrated that the network solutions on which it performed extensive testing achieved accuracy levels that would require emergency workers to search an area over a kilometer in diameter: RF fingerprinting and E-OTD located callers only to within accuracies of 567 meters and 545 meters respectively. See Response of Nextel Communications, Inc. and Nextel Partners, Inc. to Order of the Wireless Telecommunications Bureau, CC Dkt. No. 94-102 (filed May 21, 2001).

¹⁴ See *Fourth MO&O* ¶ 10.

The accuracy of location information is of paramount importance to safety, but accurate location information is also a prerequisite if a carrier is to use location technology to provide new and valuable location-based services to consumers. Leap is investigating possible commercial applications of location-based information and, based on its initial analysis, believes that the ability to receive location-based services may be valuable to consumers. For example, in addition to providing information in emergency situations, accurate location-based information may be useful for wireless consumer through services that provide directions, the location of nearby retail services, or family locator information.¹⁵

Thus, Leap believes that the availability of accurate location information through wireless handsets will facilitate the development and sale of additional location services to consumers and thus encourage consumers to purchase ALI-capable handsets. In contrast, the relatively less accurate location information provided by network solutions is likely to be far less useful to consumers: consumers will have limited use for many new applications of location-based services if that application is only able to estimate their location to within a few city blocks.

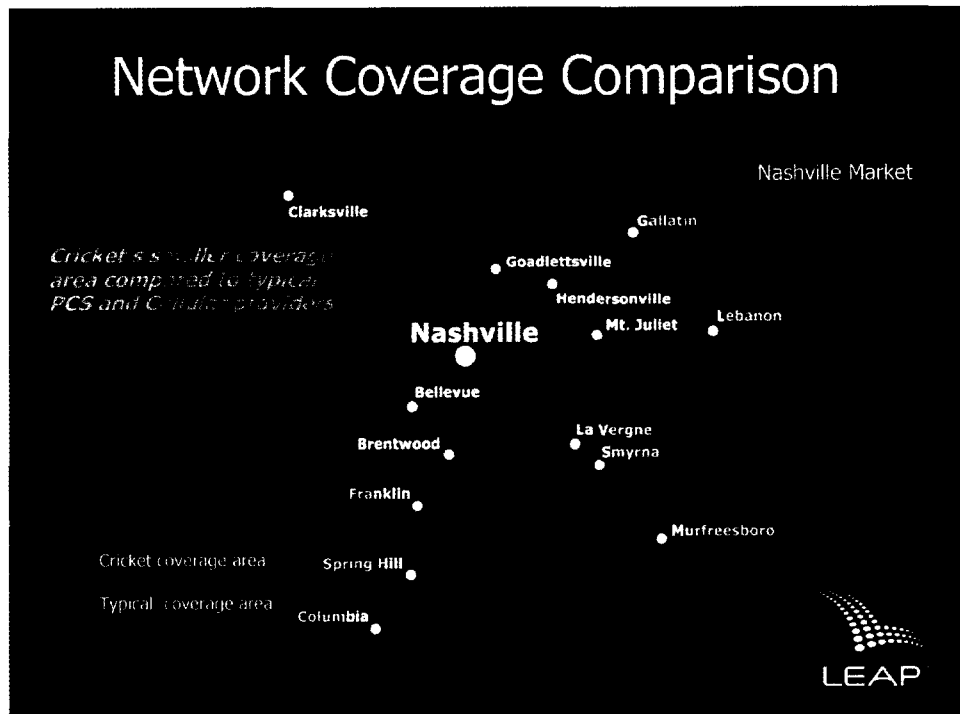
B. Network Solutions Would Not Work Well in Leap's Markets.

Leap's investigation of network-based solutions has confirmed that this technology would not work well in some of the largely suburban and less densely populated areas served by Leap's licenses. Three of the four network solutions investigated by Leap used a combination of time difference of arrival ("TDOA") and angle of arrival ("AOA") technology.

¹⁵ In addition to promoting the purchase of ALI-complaint handsets, consumer applications of location-based information are also likely to promote safety. Safety-oriented or -enhancing applications could include services such a "child finder" and personal navigation aids.

Essentially, these technologies use sophisticated triangulation techniques to ascertain a caller's location by comparing the signal received from the caller by multiple cells.

In its investigation of the various network solutions, Leap discovered that most of the tests on which vendors based their accuracy claims were conducted under conditions unlike those that prevail in Leap's markets. Most importantly, these tests generally were conducted in urban environments such as Manhattan or Seattle, where coverage could easily include several cell sites within a mile of one another. Under these conditions, a caller would almost always be within range of multiple cells. But Leap's markets tend to be predominantly suburban and, in a significant portion of Leap's coverage areas, it would be difficult for network-based solutions to provide accurate location information because of the spacing of Leap's cell sites. Similarly, Leap's networks are generally more limited in their market area than most PCS or Cellular systems. The Cricket service model promises only local service and Leap's networks do not extend beyond the places in which Leap's target demographic "live, work and play." The following figure compares the coverage provided by Leap's network in the Nashville market and the network of one of its competitors.



The smaller coverage footprint means that a larger percentage of cell sites lie on the perimeter of Leap's network than in the competitor's network. This lowers the statistical probability that a given location will receive enough different signals that it can triangulate among multiple cells.

C. Network Solutions are Prohibitively Expensive and Potentially Unworkable.

All of the network-based solutions that Leap investigated require the addition of major capital infrastructure at each cellular base station, as well as at the switch. Existing cellular antennae are only capable of detecting and collecting with limited precision the Time Difference of Arrival ("TDOA") and Angle of Arrival ("AOA") information on which most network-based solutions must rely. Therefore, in order to gather this signal information, a carrier must install new equipment at each base station. Although Leap did not ultimately pursue equipment purchase negotiations with the vendors of network-based location equipment (because network-based solutions proved undesirable in so many other respects), the required base units were estimated to cost approximately \$25,000-\$75,000 each. For a typical 50-cell network such

as the one Leap has installed in Wichita, Kansas, this infrastructure alone could cost \$3 million or more.¹⁶ If installed throughout Leap's various markets, these network solutions could cost tens or even hundreds of millions of dollars to deploy. Furthermore, some network-based solutions require extensive calibration once they are installed. Engineers must drive-test the network and tune each base unit. This would, of course, add to the expense of installing a network-based solution. And it would also tax Leap's labor supply at an already-difficult time: Leap is engaged in an aggressive build-out schedule in multiple markets, and engineering manpower is a scarce resource.

In addition to the cost, the labor involved with installing and tuning a network-based solution, coupled with the scarce labor available to perform these tasks this would delay Leap's implementation of any network-based solution. Leap estimates that it would take six to eight months once a PSAP makes a Phase II request for it to design, install, calibrate and test the system. In this respect then, a network-based solution could ultimately prove unworkable: Leap believes that it would not be able to implement Phase II capability using a network-based approach within six months of a PSAP request.

Even if Leap were now to proceed at full speed to install a network-based solution, it is far from clear that this solution would be in place materially sooner than Leap's proposed handset implementation schedule. First, it is unclear whether any such solution could be made commercially available in the immediate future: the various solutions investigated by Leap remain in relatively formative stages of testing and design. And to a much greater extent than the AGPS solution that Leap will install, a TDOA/AOA solution would require extensive

¹⁶ In addition to the capital expenditure unique to network-based solutions, these solutions would also require the addition of MPC, PDE and software upgrades comparable to the requirements of handset-based solutions.

testing and calibration once it is in place. But even if a system could be technologically perfected and then designed, installed, and calibrated in time to comply with a PSAP request, another the gating item would be installation of network software to accommodate the location information. As discussed below, software upgrades in some of Leap's markets will not become available until mid-2002.

The prohibitive expense associated with the purchase and installation of base units would be particularly difficult for Leap and its mass- consumer based offering, which appeals to a highly cost-conscious customer base. If Leap were forced to charge more for its flat-rate Cricket service plan because of the large capital expenditures required by a network-based solution, consumers would be the ultimate losers.

For these reasons, then, Leap determined not to deploy a network-based solution. After thoroughly investigating the options, Leap determined that network-based solutions would be inaccurate, expensive, and potentially unworkable for its networks. Instead, Leap will implement a handset-based solution.

IV. HANDSET-BASED SOLUTIONS WILL NOT BE AVAILABLE IN TIME.

Having determined that it will pursue a handset-based solution, Leap has worked with all of the handset manufacturers that currently sell CDMA handsets in the US in an attempt to obtain ALI-compliant handsets.¹⁷ To date, and though it continues to try, Leap has been unable to locate a manufacturer that can provide it with ALI-compliant CDMA handsets in time to meet the FCC's initial phase-in dates.

Leap has spoken to all nine manufacturers that currently sell CDMA handsets in the United States. All but two of those vendors rely on chipsets that are produced by a single

¹⁷ Leap's network uses exclusively CDMA technology.

manufacturer, QUALCOMM. The remaining two, Nokia and Motorola, currently manufacture and use their own chipsets, but neither of these manufacturers currently produces an ALI-compliant handset. Nokia, which currently supplies Leap with the majority of its handsets, will not be able to provide ALI-capable handsets to Leap until the second half of 2002. Motorola would not be able to supply ALI-capable handsets to Leap until the mid-2002 at the very earliest. Thus, Leap's only possible near-term source for Phase II compliant handsets is a manufacturer that utilizes QUALCOMM chipsets.

Three chipsets are currently made by QUALCOMM, and it has plans to manufacture two more in the near future. Currently in production are the 3000, 3100, and 3300 chipsets.¹⁸ Each of these chipsets offers slightly different features, though none incorporate the next evolution of CDMA network technology, 1XRTT.¹⁹ And more importantly, only one, the 3300, is E-911 compliant. QUALCOMM is now beginning production on another chipset, the 5105, which will incorporate 1XRTT technology, but will not be ALI-capable. Handsets using the 5105 chipset will become available in the fourth quarter, 2001. On the horizon is another chipset, the 5100, which will be compatible with 1XRTT and will be E-911 compliant. But Leap expects that handsets using the 5100 chipset will not become commercially available until the second quarter of 2002 or later.

¹⁸ There may be a limited number of 2300 chipset products still in production as well, but use of this chipset is extremely limited and is being phased out.

¹⁹ This technology is sometimes thought of as "third generation" or "3G." Leap intends to begin rolling out 1XRTT technology in its markets in the near future.

QUALCOMM CDMA Chipsets

Chipset	ALI-Capable?	1XRTT-Compatible?	Handset Availability
3000	No	No	Current
3100	No	No	Current
3300	Yes	No	Limited availability in 3Q'01 – but not available to Leap
5100	Yes	Yes	Second Quarter '02
5105	No	Yes	Fourth Quarter '01

In order to comply with the initial stages of the Phase II E-911 phase-in, then, Leap would need to obtain and sell to its customers handsets using the QUALCOMM 3300 chipset, the only QUALCOMM CDMA chipset that is currently available and ALI-compliant. But Leap has not been able to obtain handsets with the 3300 chipset from any manufacturer.

At the time Leap made its election to pursue a handset based solution, Leap informed its vendors of its decision. And it also informed them of the FCC-mandated implementation timeline. In addition, starting in January 2001, Leap approached and held serious discussions with nine different manufacturers²⁰ in its efforts to obtain handsets in time for the October 1 implementation milestone. Over the past few months, every one of these manufacturers has declined to provide handsets to Leap in time to meet the initial FCC milestone. Seven manufacturers stated that they would not be producing any handsets at all using the 3300 chipset. The two other manufacturers, Samsung and Denso, stated that they would be producing a 3300 handset but that they could not make that handset available to Leap. Each of these two manufacturers has apparently entered into an arrangement with a major US carrier that prevents them from selling any of their current production 3300 handsets to Leap. Thus, manufacturers currently produce only two CDMA handsets that are ALI-compliant, and neither one is available for Leap to purchase.

Leap also explored the possibility of a special manufacturing and purchase arrangement with some handset manufacturers that would allow Leap to purchase compliant handsets. That is, Leap attempted to induce the manufacturers to produce ALI-capable handsets for Leap by promising to order a minimum quantity. But because Leap is a relatively small carrier, it was not able to guarantee a minimum order that was large enough to persuade the manufacturers to produce handsets using the 3300 chipset.

CDMA handset manufacturers may be slow in producing and supplying ALI-compliant handsets because they may have originally believed that there would be limited demand for these products. More than eighty percent of the CDMA handsets sold in the United States go to the two biggest CDMA carriers – Sprint and Verizon. A year ago, Verizon filed for a network-based solution (though it has since determined to pursue a handset solution),²¹ and Sprint has agreed to purchase ALI-compliant handsets from Samsung and Denso. That appeared to leave only a small portion of the CDMA handset market open to manufacturers that might choose to produce ALI-compliant handsets. The problems associated with the perceived limit in demand have probably been compounded by the fact that chipset technology is in transition, and QUALCOMM's 3000-series will soon be replaced by its 5000-series. Manufacturers appear reluctant to produce handsets using the 3300 chipset when those handsets will soon be rendered obsolete by the 5100 and other chipsets.

Regardless of the reason, Leap has been unable to purchase ALI-compliant handsets from manufacturers in time to meet the Commission's initial implementation milestones.

²⁰ Those manufacturers are: Nokia, Motorola, Ericsson, Kyocera, Audiovox, Sanyo, Samsung LG and Denso.

²¹ See Verizon Wireless Updated Phase II E911 Report and Request for Limited Waiver, CC Dkt. No. 94-102 (filed July 25, 2001).

V. LEAP WILL ADOPT A PHASED-IMPLEMENTATION SCHEDULE THAT PROVIDES A CLEAR PATH TO COMPLIANCE.

In accordance with the Commission's dictates, Leap has developed an alternative schedule for Phase II implementation that provides a "clear path to full compliance."²² Leap has worked out and will adhere to a "revised schedule"²³ for Phase II implementation that postpones compliance with the first few implementation milestones, but provides that Leap will meet the Commission's final implementation deadline, that calls for nearly universal deployment of ALI-compliant handsets by the end of 2005.

A. Leap's Alternate Timetable Postpones the Interim Milestones; the Final Implementation Deadline Will Be Met on Time.

As noted above, only two manufacturers currently produce a CDMA handset that is ALI-compliant – and neither of these manufacturers is able to supply that handset to Leap. Leap believes that most CDMA handset manufacturers will not produce an ALI-compliant handset based on the only CDMA chipset that currently provides ALI capabilities – QUALCOMM's 3300 chipset. Instead, Leap expects that most CDMA handset manufacturers will not produce ALI-compliant handsets until they introduce new handset models based on the QUALCOMM 5100 chipset or an alternate chipset that works with 1XRTT network technology and is also ALI-compliant. Leap also believes that handset manufacturers such as Nokia and Motorola will not introduce GPS functionality until after they introduce 1XRTT handsets.

As a result, Leap believes that it cannot meet the interim Phase II milestones that call for widespread availability of ALI-compliant handsets on time. Leap likely will not be able to introduce Phase II handsets in all of its markets, and in sufficient quantities to allow their

²² *Fourth MO&O* ¶ 44.

²³ *Id.*

widespread adoption, until the last several months of 2002 and early 2003. Leap's proposed alternate implementation timetable reflects this expectation.

Furthermore, Leap's compliance with the interim milestones is in large part dependant on consumer acceptance. Leap will make compliant handsets commercially available, and will market and position them in ways designed to induce consumer acceptance, but it cannot guarantee that consumers will purchase them in any preordained quantities. Based on the likely timeline for commercial availability of ALI-compliant and 1XRTT-compatible handsets, and based on projections of consumer demand and acceptance, Leap expects that twenty-five percent of its new handset activations will be Phase II compliant by September 30, 2002. Likewise, based on the same timeline and projections, Leap believes that fifty percent of its new handset activations will be Phase II compliant by January 31, 2003. However, until it eliminates non-ALI handsets from its inventory entirely – and thus one hundred percent of activations are ALI-compliant – Leap cannot guarantee that consumers will adopt any particular handset in specified numbers.

Throughout calendar year 2003, Leap will gradually phase out sales of non-ALI-capable handsets from its markets. Based on its expectations of handset availability and consumer demands, Leap believes that it will eliminate its remaining inventory of non-ALI-capable handsets and thus will be able to achieve 100 percent sales of ALI-capable handsets by October 31, 2003. Finally, and most importantly, based upon its average churn rate and typical handset lifecycles, Leap projects that it will meet the Commission's final implementation deadline: Leap will achieve 95 percent penetration of ALI-capable handsets among its subscribers before December 31, 2005.

Leap's proposed alternate timeframe is realistic, and will ultimately serve the public interest. The handset solution that Leap plans to implement will provide extraordinary location accuracy using GPS technology. This solution will allow E911 callers to be located to within 10 meters accuracy – 15 times better than the Commission's minimum standard for handset-based solutions, 30 times better than the Commission's minimum standard for network-based solutions. In all, the public will realize substantial benefits to safety.

B. Installation of PDE and MPC Equipment Will Not Significantly Delay Compliance

Commercial distribution of AGPS-enabled handsets will not by itself create compliance with the Commission's E-911 Phase II mandate. A handset is capable only of producing raw data. Certain network upgrades and modifications are required to interpret that data and transform it into meaningful location information, and to deliver that data from an emergency caller to the appropriate Public Safety Answering Point ("PSAP"). Leap is working with its various hardware and software vendors to ensure that the required upgrades and modifications are available. Leap believes that these network upgrades will be in place contemporaneously with or before the widespread availability of AGPS handsets, and therefore will not delay Leap's Phase II implementation.

Three basic network upgrades are necessary to implement a handset-based E-911 solution. Position Determining Equipment ("PDE") must be installed to gather the raw data delivered by a handset, to interpret that data, and to calculate the handset's exact geographic position. A Mobile Positioning Center ("MPC") must then receive that location data from the PDE, verify its origin and the type of handset making the call, determine which PSAP should receive that call, and deliver the call – along with the location information – to the appropriate

PSAP. In addition to these network hardware requirements, proper processing of Phase II information will require various software upgrades and “patches” at each of Leap’s switches.

Leap has employed an outside consultant, InCode Telecom, to assist in finding the optimum solution that will meet Leap’s needs for E911 Phase II and related location-based services. Leap and InCode have together performed a thorough evaluation of five proposed vendors: Ericsson, Lucent, Compaq, TCS and Intrado. Leap is now in the process of finalizing its vendor selection and negotiating an agreement for the acquisition of MPC and PDE platforms. Leap expects to take delivery and make its first installations of MPC and PDE hardware in the Fall of 2001, after which it will test and incorporate the hardware into its overall E911 system. Leap’s MPC and PDE will be available in time for the trials that Leap plans to begin in December 2001 to test the ability of its networks to support ALI-compliant handsets. Leap anticipates that all MPC and PDE systems will be fully tested and operational when handsets become commercially available in the Second Quarter 2002. Leap therefore believes that MPC and PDE readiness will not delay its Phase II compliance.

Leap is receiving and will continue to receive the various software upgrades and patches necessary to accommodate the addition of Phase II equipment to its existing networks. Leap expects that Lucent upgrades will be available in Fourth Quarter of 2001, and that Ericsson upgrades will be available in First Quarter of 2002. Likewise Leap expects that Nortel upgrades will be available by Second Quarter, 2002. Based on these expected delivery schedules, Leap expects that its switching software will be upgraded by March 31, 2002 for its Lucent markets; by June 30, 2002 for its Ericsson markets; and by September 30, 2002 for its Nortel markets. Leap’s networks will therefore be capable of handling Phase II information on a timeframe that is consistent with and supportive of its handset implementation plans.

VI. CONCLUSION

Leap is not alone in its request for additional time to implement the E911 Phase II location accuracy requirements. Every major CDMA carrier has now requested a similar waiver.²⁴ Industry-wide, carriers have been stymied in their efforts to comply with the Commission's E911 rules. Carriers such as Leap have tried mightily to obtain the hardware and software necessary to ensure their timely compliance, but vendors have not and will not make handsets and certain other equipment available in time to meet the implementation milestones. Leap finds itself in a position somewhat worse than some of its larger rivals not for lack of diligence, but rather because it lacks the leverage and purchasing power that might induce vendors to make earlier delivery of handsets and other scarce equipment to Leap.

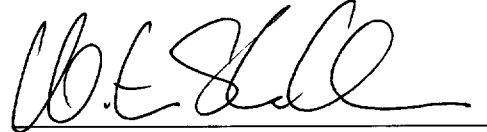
Nevertheless, Leap has taken concrete steps to implement Phase II capability. It has investigated and evaluated a variety of solutions from a number of equipment vendors. And while it will be unable to meet the Commission's initial implementation milestones, Leap has identified and outlined a clear path to compliance, and will meet the Commission's ultimate goal that 95 percent of all subscribers carry ALI-capable handsets by the end of 2005.

²⁴ See ALLTEL Communications Inc. Petition for Waiver (filed July 25, 2001); Qwest Wireless LLC and TW Wireless LLC Petition for Extension of Time or Waiver (filed July 23, 2001); Sprint PCS Supplemental Phase II Implementation Report and Request for Temporary and Limited Waiver (filed July 30, 2001); Verizon Wireless Updated Phase II E911 report and Request for Limited Waiver (filed July 25, 2001).

For these reasons, Leap respectfully requests that the Commission grant a partial waiver of Section 20.18 of its rules in order to allow Leap to follow the implementation timetable outlined herein.

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